

JC13 Rec'd PCT/PTO 27 FEB 2002

PATENTS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Attilio CITTERIO et al.

Serial No. (unknown)

Filed herewith

METHODS FOR SURFACE MODIFICATION
OF SILICA FOR USE IN CAPILLARY
ZONE ELECTROPHORESIS AND CHROMA-
TOGRAPHY

PRELIMINARY AMENDMENT

Commissioner of Patents

Washington, D.C. 20231

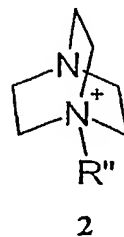
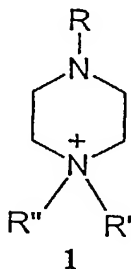
Sir:

Prior to calculation of the filing fee, please amend
the above-identified application as follows:

IN THE CLAIMS:

Amend claim 3 as follows:

3. (amended) Compounds as claimed in claim 2, of
formula 1 and 2,



wherein R is a C₁-C₄ alkyl group, and R' and R'' are indepen-
dently a (C₁-C₄) alkyl group or a group of formula [(CH₂)_n]Z,
where n = 3-6 and Z is halogen, hydroxy, (C₁-C₄) alkoxy, p-
toluenesulphonyloxy or N₃.

Attilio CITTERIO et al.

Amend claim 7 as follows:

7. (amended) The use of the compounds as claimed in claim 1 for chromatographic separations utilizing silica-based material.

Amend claim 8 as follows:

8. (amended) The use of spheres and of silica material in general, treated with the compounds as claimed in claim 1, for chiral chromatographic separations.

Amend claim 9 as follows:

9. (amended) The use of the compounds as claimed in claim 1 for coating glass and borosilicate surfaces as used in nanotechnologies for electrophoretic separations of any class of molecules.

Amend claim 11 as follows:

11. (amended) The use of capillaries treated with the compounds as claimed in claim 1 for separations of proteins and peptides, at any value of the pH scale necessary for optimizing such separations, including capillary electrophoresis using hyphenated techniques.

Amend claim 12 as follows:

12. (amended) The use of capillaries treated with the compounds as claimed in claim 1 for separations of proteins and peptides in both conventional buffers and amphoteric, isoelectric buffers, either acidic or neutral or alkaline.

Amend claim 13 as follows:

13. (amended) The use of capillaries treated with the compounds as claimed in claim 3 for separations of

Attilio CITTERIO et al.

oligonucleotides and DNA fragments, in both conventional buffers and amphoteric, isoelectric buffers, either acidic or neutral or alkaline.

Amend claim 14 as follows:

14. (amended) The use of capillaries treated with the compounds as claimed in claim 3 for separations of small molecules able to interact with the capillary wall or whose separations might be hampered by the EEO flow of non-conditioned capillaries.

Amend claim 15 as follows:

15. (amended) The use of capillaries treated with the compounds as claimed in claim 3 for chiral separations.

Add the following new claim:

--16. (new) The use of capillaries treated with the compounds as claimed in claim 5 for chiral separations.--

R E M A R K S

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE".

Respectfully submitted,

YOUNG & THOMPSON

By

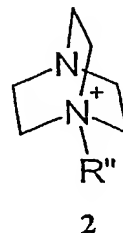
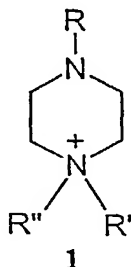


Benoît Castel
Attorney for Applicants
Registration No. 35,041
745 South 23rd Street
Arlington, VA 22202
Telephone: 703/521-2297

February 27, 2002

VERSION WITH MARKINGS TO SHOW CHANGES MADE

3. Compounds as claimed in ~~claims 1 and~~ claim 2, of formula 1 and 2,



wherein R is a C₁-C₄ alkyl group, and R' and R'' are independently a (C₁-C₄) alkyl group or a group of formula [(CH₂)_n]Z, where n = 3-6 and Z is halogen, hydroxy, (C₁-C₄) alkoxy, p-toluenesulphonyloxy or N₃.

7. The use of the compounds as claimed in ~~claims 1 to 6~~ claim 1 for chromatographic separations utilizing silica-based material.

8. The use of spheres and of silica material in general, treated with the compounds as claimed in ~~claims 1 to 6~~ claim 1, for chiral chromatographic separations.

9. The use of the compounds as claimed in ~~claims 1 to 6~~ claim 1 for coating glass and borosilicate surfaces as used in nanotechnologies for electrophoretic separations of any class of molecules.

11. The use of capillaries treated with the compounds as claimed in ~~claims 1 to 6~~ claim 1 for separations of proteins and peptides, at any value of the pH scale

Attilio CITTERIO et al.

necessary for optimizing such separations, including capillary electrophoresis using hyphenated techniques.

12. The use of capillaries treated with the compounds as claimed in ~~claims 1 to 6~~ claim 1 for separations of proteins and peptides in both conventional buffers and amphoteric, isoelectric buffers, either acidic or neutral or alkaline.

13. The use of capillaries treated with the compounds as claimed in ~~claims 3 to 6~~ claim 3 for separations of oligonucleotides and DNA fragments, in both conventional buffers and amphoteric, isoelectric buffers, either acidic or neutral or alkaline.

14. The use of capillaries treated with the compounds as claimed in claim 3 ~~to 6~~ for separations of small molecules able to interact with the capillary wall or whose separations might be hampered by the EEO flow of non-conditioned capillaries.

15. The use of capillaries treated with the compounds as claimed in ~~claims 3 and 5~~ claim 3 for chiral separations.